

## CLAIMS

1. An H chain polypeptide of a recombinant antibody against human TNF $\alpha$ , or its fragment, which has at least one of the following amino acid sequences:

a) the amino acid sequence represented by SEQ ID NO:1 as CDR-H1;

b) the amino acid sequence represented by SEQ ID NO:2 as CDR-H2; and

c) the amino acid sequence represented by SEQ ID NO:3 as CDR-H3.

2. An H chain polypeptide of a recombinant antibody against human TNF $\alpha$  which contains the H chain variable region of an antibody against human TNF $\alpha$  comprising the amino acid sequence represented by SEQ ID NO:7 or an amino acid sequence derived from said amino acid sequence by deletion, addition or substitution of one to several amino acids in a region other than the amino acid sequences represented by SEQ ID NOS:1 to 3, or its fragment.

3. An L chain polypeptide of a recombinant antibody against human TNF $\alpha$  which has at least one of the following amino acid sequences:

a) the amino acid sequence represented by SEQ ID NO:4 as CDR-L1;

b) the amino acid sequence represented by SEQ ID NO:5 as CDR-L2; and

c) the amino acid sequence represented by SEQ ID NO:6 as CDR-L3.

4. An L chain polypeptide of a recombinant antibody

against human TNF $\alpha$  which contains the L chain variable region of an antibody against human TNF $\alpha$  comprising the amino acid sequence represented by SEQ ID NO:8 or an amino acid sequence derived from said amino acid sequence by deletion, addition or substitution of one to several amino acids in a region other than the amino acid sequences represented by SEQ ID NOS:4 to 6.

5. A gene encoding an H chain polypeptide or its fragment as claimed in claim 1 or 2.

6. A gene encoding an L chain polypeptide as claimed in claim 3 or 4.

7. An expression vector having the gene(s) as claimed in claim 5 and/or claim 6 incorporated therein.

8. A method for producing a recombinant antibody against human TNF $\alpha$  which comprises transforming host cells by the expression vector as claimed in claim 7, culturing the host cells under such conditions as allow expression of the antibody against human TNF $\alpha$ , and collecting the antibody thus produced by the host cells.

9. A recombinant antibody against human TNF $\alpha$  which can be obtained by a gene recombination technique using the gene(s) as claimed in claim 5 and/or claim 6 or the method as claimed in claim 8, or its fragment.

10. A pharmaceutical composition comprising the antibody as claimed in claim 9 or its fragment together with a pharmaceutically acceptable carrier.